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## Water officials feeling pressure

By Robert Knox

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As municipal water systems face the need to raise more money for infrastructure maintenance while selling less water to today's waste-conscious consumers, Sharon officials are considering fundamental changes in the way the town charges for water.

A poster child for good water husbandry in the past, the town is weighing raising its standard "base fee" in order to build revenues for the replacement of aging pipes and other system components. The base fee - a standard amount charged to each customer, regardless of usage - falls more heavily on fixed-income households and may reduce the incentive for saving water, some conservationists say.

A public hearing on proposed rate increases is scheduled for Tuesday at 7 p.m. in the Sharon Community Center, 219 Massapoag Ave.

"Water rates are the most powerful tool we have to improve water-use efficiency," said Paul Lauenstein, a member of the town's Water Management Advisory Committee, and a water-conservation consultant for the town of Georgetown.

Sharon's current ascending rate schedule - as customers use more water in a billing period, they pay a higher rate for each segment or "block" of use - has helped the town reduce water consumption significantly in recent years, Lauenstein said.

But almost everyone agrees that the state's municipal water systems are facing the need to reinvest in basic infrastructure, including power equipment, pipes, manholes, pumps, water- and waste-water treatment plants, outfalls, filter beds, and other components. The Massachusetts Water Works Association, a membership organization for community water managers, recently established a commission to look into the issue of financing the needed upgrades.

"All of the municipalities highlighted concerns about aging water and sewer systems, and diminishing resources available to maintain these systems," the association's panel of experts stated in a June report. "Most municipalities are facing needed investment in their basic assets."

Sharon's case exemplifies this need. Officials have placed the cost of maintaining assets and replacing old pipes and other components that are "aging out" at more than \$1 million a year. The town of about 17,600 residents has 120 miles of pipe, of which about 18 miles is 100 years old. Maintenance and replacement will require rate increases, officials say, since in Sharon, as in most communities, the costs of running the system are borne by its customers.

Town officials are weighing a plan to raise the base fee from the current \$15 per quarter for residential customers to \$60 a quarter, with the change taking place in increments over a period of years.

Eric Hooper, Sharon's Public Works Department superintendent, points out that even those consuming the least amounts of water have an obligation to support the entire system's infrastructure. The base fee grants customers "access to the system," he said, and the need for access is the same for every customer.

"If you have a fire, you need to have access to the public water supply," Hooper said. "Regardless of whether you ever use a drop of the water, you need access."

Under the changes to the rate schedule proposed to start Oct. 1, residential consumers would pay a base of \$15, and \$3 per 1,000 gallons up to 7,500 gallons; \$6.50 per 1,000 from 7,500 to 15,000 gallons; \$7.50 up to 22,500; and \$12.50 above 22,500 gallons.

The average bill in Sharon is \$405 a year, or about \$100 a quarter. But for big water users during the outdoor watering season, the ascending scale increases bills significantly. A separate spring and summer seasonal rate

sharpens the bite, raising the highest block to \$15 per 1,000 gallons in order to encourage saving water during the time of peak demand on the town's system.

But this structure doesn't raise enough money to rebuild the system or spread the costs widely enough, according to Hooper and the majority of the Water Management Advisory Committee.

"There is general agreement that the base fee should be an access charge that needs to be an equal charge to each account," Hooper said. "How quickly that charge increases and how large that number becomes is the debate."

For Lauenstein, however, the debate should be whether increasing a fee paid by those who use less water increases their actual per-gallon cost above those who use more - the opposite effect of a conservation-driven scale.

The current ascending rate structure "provides a strong incentive to conserve, and has been a leading reason why water-use efficiency has improved so much in Sharon," Lauenstein said. The state has singled out Sharon for its water-saving measures the last two years.

A rate structure that significantly increases the base charge "would greatly reduce the incentive to conserve, penalize those who are benefiting the whole community by conserving, lower the cost of water for water wasters, and create a hardship for people experiencing financial distress, even if they don't use much water," he said.

Water system managers in other area communities agree that maintenance and replacement of old facilities is a major concern, but some say they are managing without sharp increases in rates.

In Duxbury, where the average annual cost is \$459, Town Manager Richard MacDonald said, "We have a long-range plan which we implement every year. We are in good shape." Though providing water becomes "more and more expensive every year," and selectmen review the rates annually, his town is not anticipating major rate hikes, MacDonald said.

"Water systems, sewer, roads, bridges - they all need work," said Jonathan Beder, Plymouth's public works director. "I think we all recognize it. We have routine inspections on our pumping stations, our tanks."

Plymouth, he noted, is facing a \$500,000 cost simply to paint the Cedarville water tank, one component in a large and aging system. But Beder said the town tries to manage budgets so his department doesn't need big rate hikes. "You can't expect to raise it 10 percent," he said.

According to Tighe & Bond, a consulting engineering company that publishes an annual survey of state water rates, it's hard to compare water rates because rate structures vary widely.

Of the state's 351 communities, 63 percent use an ascending-rate schedule like Sharon's to promote water conservation. Others, including Quincy, which gets its supply from the Massachusetts Water Resources Authority, charge a flat rate.

But even ascending-rate structures vary considerably. Some include varying basic service or "meter" fees to all users before calculating the per-gallon user fee. Abington and Rockland charge a \$10 meter fee. Compared with Sharon's \$15 base fee, Duxbury charges \$32.72, Dedham's base is \$29.61, and Plymouth has a \$25 semiannual "minimum fee."

Some communities allow that basic fee to cover the first block of gallons of use, creating a bigger break for low-end users.

Few have separate seasonal rates like Sharon's. Charging customers more to encourage conservation when demand is high is needed to prevent higher infrastructure costs such as new wells, conservationists say. Lauenstein points to the example of Dedham, which recently joined the MWRA to obtain more water in the summer at a high cost.

Communities may do well to reinvest in those old infrastructures. Lauenstein pointed out that MWRA water remains considerably more expensive than water from local wells. The average annual bill in Quincy, a city with relatively few large lawns, is \$565, one of the higher amounts in the area.

Water customers in Hingham and Hull, which rely on a private water provider, pay \$919.

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